REMARKS

Claim Status

Claims 1-6 are currently pending, with claim 1 being the only independent claim. Independent claim 1 has been amended. Support for the amendment may be found, for example, at pg. 5, lines 16-18 and lines 30-31 of the specification as originally filed. No new matter has been added. Reconsideration of the application, as herein amended, is respectfully requested.

Overview of the Office Action

Claims 1-3 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,944,823 ("*Jade*"). Claims 4-6 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Jade* in view of U.S. Pub. No. 2004/002835 ("*Read*").

Applicants have carefully considered the Examiner's rejections, and the comments provided in support thereof. For the following reasons, applicants respectfully assert that all claims now pending in the present application are patentable over the cited art.

Patentability of Independent Claim 1 Under 35 U.S.C. §102(b)

Independent claim 1 has been amended to now recite, *inter alia*, "a mediation system in the private IP network that is associated with the first computer terminal, said mediation system being configured to make an IP interface available to the second terminal via a service port of the mediation system" and "a control server in the public IP network, said control server being operable to configure and control said mediation system via a communications tunnel established through said network boundary equipment using the service port of the mediation system".

Support for the amendment to claim 1 may be found, for example, at pg. 5, lines 16-18 and lines 30-31 of the originally filed specification. No new matter has been added.

The Examiner (at pg. 3 of the Office Action) asserts that:

> [Jade discloses] ... **a control server in the public IP network** (Jade: Col. 3, lines 37-43. The connection between Server A (in private network) and Server B (in public network) creates a "control" connection. Col. 4, lines 16-19. Server B "controls" connections from public network into private network.), **said control server being operable to configure and control said mediation system via a communications tunnel through said network boundary equipment** (Jade: Col. 5, lines 3-11. Server B sends control signals to establish a connection between Server A (in private network) and the requesting object (inside the public network).).

Applicants disagree.

Jade relates to a method and apparatus for providing access of resources of a computer system or network to objects located externally to a security firewall in response to requests from the externally located objects (see col. 1, lines 5-8). *Jade* (col. 1, lines 51-56) explains that "means are provided inside and outside a firewall for cooperatively producing tunneling effects, in response to certain types of requests initiated by objects outside the firewall, which effects result in creation of connections between such outside objects and resources inside the firewall".

According to *Jade*, "[t]rusted sockets are entries in a table of trusted sockets that is created and maintained exclusively inside the firewall. Each entry in that table includes the address of a 'trusted' port, a protocol (e.g. a telecommunication protocol such as TCP/IP, NNTP, etc.) pre-associated with that address, and the identity of a host object inside the firewall (e.g. a host computer or a host application)" (see col. 1, line 62 to col. 2, line 2). *Jade* additionally explains that the table of trusted sockets is provided to an individual or object located outside of the firewall to initiate connection requests (see, e.g., col. 2, lines 2-6).

Pursuant to permitting connection through the firewall, *Jade* (col. 3, lines 37-49; Fig. 1) explains that "[the] trusted socket table (which is described below in reference to FIG. 4) is created in and stored at server A (or a store readily accessible to that server). As shown at 11, server A creates a special 'control connection' to server B through the firewall (computer), and passes a copy of the trusted sockets table to server B over the control connection". *Jade* (col. 3, lines 50-52) further explains that "[s]egments of these data connections extending through the firewall are entirely separate from the control connection used in their formation". The control connection of *Jade* is not the disclosed tunneling that is performed in the *Jade* system. The connection that is performed in *Jade* is to permit transmission of the trusted socket table to the outside server B; the tunneling in the *Jade* system is performed via an additional, separate and distinct connection. *Jade* thus teaches a system in which *at least* two connection paths are established, one connection path for control purposes and the other connection path to provide the tunneling for permitting access to the trusted socket ports to thereby commence data communications.

As further explained at col. 2, lines 13-22 of *Jade*, "[t]he inside interface server also establishes a 'control connection' to an outside interface server which interfaces between the firewall and all objects outside the firewall. The control connection is accessible only to the tunneling application running on the inside interface server and a corresponding tunneling application running on the outside interface server; i.e. it is not directly accessible to any other applications running on these interface servers, and is totally inaccessible to both inside and outside objects not residing on these servers". *Jade* (col. 2, lines 51-57) additionally clarifies that "[t]he connections generated/spawned by the inside and outside tunneling applications are separate from the control connection, and useful to carry data (usually in packet format defined

by the trusted socket protocol) bidirectionally between the outside object that originated the request and the inside object targeted by the request". *Jade* thus expressly teaches the formation of multiple connections, which differs from the communications and functionality implemented in the system of now amended independent claim 1 in which the communications tunnel is established through the network boundary equipment using the same service port of the mediation system.

Independent claim 1 accordingly now recites, *inter alia*, "a control server in the public IP network, said control server being operable to configure and control said mediation system via a communications tunnel established through said network boundary equipment using the service port of the mediation system". The control and configuration of the mediation system that is performed by the control server of now amended independent claim 1 is expressly recited in the claims as being performed over the same connection, i.e., the same service port. There is no creation of an additional control connection to receive a table of trusted sockets in the manner taught by *Jade*.

It is an object of applicants' claimed invention to permit incoming communications to enter a private network, such as to establish a phone call and, thus, traverse the boundary equipment of the private network, such as a firewall or Network Address Translation (NAT) functionality. As explained at paragraph [0032] of the instant specification, the control server is configured to request or instruct the mediation equipment to perform an operation, such as opening a port associated with a specific IP address, in order to transmit data.

The mediation server of *Jade* merely authorizes or refuses to send the table of trusted sockets based on the receipt of valid requests from outside via an additional control connection. In contrast, the control server of now amended independent claim 1 receives requests for

communication with the private network and configures and controls the mediation system via a communications tunnel established through the network boundary equipment using the same service port of the mediation system so that the mediation server makes an IP interface available for communication with the private network. *Jade* quite clearly fails to teach or suggest this expressly recited subject matter of now amended independent claim 1.

Moreover, the skilled person seeking to implement the *Jade* system to obtain a communication system that allows calls from a public network to a private network would be required to first provide the table of trusted sockets to the outside server. There is no need for the claimed invention to provide such a list of sockets because all communication occurs over the same port so that the address and port ID (see, e.g., dependent claims 4-5) of the claimed control server provides sufficient information to establish the communication or call. The skilled person would therefore have no motivation to modify the teachings of *Jade* to achieve the express recitations of independent claim 1 absent impermissible hindsight reconstruction. Independent claim 1 is therefore deemed to be patentable over *Jade*.

In view of the foregoing, applicants submit that *Jade* fails to teach or suggest the recited subject matter of independent claim 1. Reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. §102 are thus deemed to be in order, and early notice to that effect is solicited.

Moreover, by virtue of the above-discussed differences between the recitations of independent claim 1 and the teachings of *Jade*, and the lack of any clear motivation for modifying *Jade* to achieve applicants' claimed invention, independent claim 1 is likewise deemed to be patentable over *Jade* under 35 U.S.C. §103.

Patentability of Dependent Claims 4-6 under 35 U.S.C. §103(a)

The Examiner (at pgs. 5-7 of the Office Action) acknowledges that *Jade* is silent with respect to the recitation "when relaying a packet from a port opened beforehand by the control server which indicates the receiver port, IP address and port number of sending port, and the received packet" of dependent claims 4-6, and cites *Read* for this feature.

Applicants, however, contend that no combination of *Jade* and *Read* achieves the subject matter of independent claim 1 from which claims 4-6 depend. There is simply nothing in *Read* to cure the above-discussed deficiencies in *Jade* relating to the lack of teachings of applicants' claimed system for communication between a first computer terminal of a private Internet Protocol (IP) network and a second computer terminal of a public IP network in which a control server is operable to configure and control a mediation system via a communications tunnel established through network boundary equipment using the same service port of the mediation system.

Jade and *Read*, individually or in combination, thus fail to teach or suggest the steps recited in now amended independent claim 1, and dependent claims 4-6 are accordingly deemed to be patentable based *at least* on their dependency from claim 1.

Dependent Claims

In view of the patentability of independent claim 1 for the reasons presented above, each of dependent claims 2-6 is respectfully deemed to be patentable therewith over the prior art. Moreover, each of these claims includes features which serve to still further distinguish the claimed invention over the applied art.

Conclusion

Based on all of the above, applicants submit that the present application is now in full and proper condition for allowance. Prompt and favorable action to this effect, and early passage of the application to issue, are once more solicited.

Should the Examiner have any comments, questions, suggestions or objections, the Examiner is respectfully requested to telephone the undersigned to facilitate an early resolution of any outstanding issues.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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